

Application Serial No. 09/684,383
Amendment dated 25 August 2004
Reply to Office Action dated 25 May 2004

REMARKS

Claim 29 has been amended to specify that the region of the seven conserved cysteine residues comprises amino acid residues "247-352." Support for this amendment can be found in Figure 1 which shows a portion of the MP121 protein compared to other members of the TGF- β family. This portion of the MP121 protein corresponds to amino acid residues 247-352 of the protein set forth in SEQ ID NO:2.

It is submitted that this amendment does not constitute new matter, and its entry is requested.

The Examiner has rejected claims 24 and 26-34 under 35 U.S.C. § 112, first paragraph for lack of written description. The Examiner contends that the recitation of "nucleotides 866-1183" and "nucleotides 869-1186" in claim 24 and "residues 247-351" in claim 29 are new matter because the specification fails to disclose these limitations. The Examiner contends that the specification discloses that the mature human protein MP121 preferably begins at nucleotide 836, and does not disclose the specific limitation of nucleotides 866-1183 as recited in claim 24. Similarly, the Examiner contends that the specific limitation of nucleotides 869-1186 for the mouse protein in claim 24 and residues 247-351 of the human and mouse proteins in claim 29 are also not disclosed. It is submitted that the Examiner is in error in this rejection.

Although the language objected to by the Examiner does not appear *in haec verba* in the specification, Applicants submit that specification, with the figures, contains an equivalent description of the claimed subject matter. Specifically, the specification in the paragraph bridging pages 6-7 as filed states:

Within the scope of the present invention the term "mature protein" also encompasses functional partial regions of the complete protein which exhibit essentially the same biological activity and preferably those partial regions which include at least the region of the seven cysteines that are conserved in the TGF- β family. In this case it is in particular possible that the N-terminus of the mature protein is slightly modified i.e. deviates from the sequences shown in SEQ ID NO.2 and 4. In this connection additional amino acids, which do not influence the functionality of the protein, may be present or amino acids may be absent provided that in this case the functionality is also not impaired. However, it is preferred that the human protein and the mouse protein contain all amino acids

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starting with amino acid 237 of the amino acid sequence shown in SEQ ID NO.2 and SEQ ID NO.4. It is already known from other family members of the TGF- β family that the attachment of additional amino acids to the N-terminus of the mature protein does not influence the activity wherein inter alia 6 additional histidines were attached to the N-terminus.

This language provides support for a protein having residues 247-352 of SEQ ID NOs:2 and 4, and thus also the corresponding DNA molecules comprising nucleotides 866-1183 of SEQ ID NO:1 and nucleotides 869-1186 of SEQ ID NO:3.

The recited portion of the specification clearly discloses variation in the N-terminus of the protein. Furthermore, Figure 1 shows a comparison of the amino acid sequence of human MP121 with some other members of the TGF- β family "starting at the first of the seven conserved cysteine residues." See, page 5, last paragraph of the specification. The amino acid sequence for human MP121 in Figure 1 comprises residues 247-352. Thus, the specification clearly describes a protein comprising residues 247-352. In view of these disclosures, Applicants submit that the specification contains a written description of a protein comprising amino acid residues 247-352 of SEQ ID NO:2. Residues 247-352 of SEQ ID NO:2 correspond to nucleotides "866-1183" of SEQ ID NO:1, as it is stated in the specification that SEQ ID NO:2 was derived from SEQ ID NO:1 (see page 4, last paragraph). Thus, Applicants submit that the specification clearly describes a DNA molecule comprising these nucleotides.

Furthermore, the specification shows that MP121 for human and mouse are very similar (seen in comparing the sequences in SEQ ID NOs:2 and 4). The specification also discusses various aspects of the mouse protein "in analogy to the human protein." See page 5, second paragraph which discusses the protein of SEQ ID NO:4. Since mouse MP121 and human MP121 are very similar, everything regarding the mouse DNA and/or amino acid sequences can be derived accordingly from human MP121 as noted on page 5 of the specification. Thus, Applicants submit that the specification contains a description of the position of the first conserved cysteine for mouse MP121. In view of these disclosures, Applicants submit that the specification contains a written description of a protein comprising amino acid residues 247-352 of SEQ ID NO:2. Residues 247-352 of SEQ

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ID NO:4 correspond to nucleotides "869-1186" of SEQ ID NO:3, as it is stated in the specification that SEQ ID NO:4 was derived from SEQ ID NO:3 (see page 5, second paragraph). Thus, Applicants submit that the specification clearly describes a DNA molecule comprising these nucleotides.

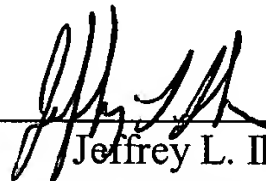
As demonstrated above, although the specification does not contain a *in haec verba* description of the claimed invention, the specification does contain an equivalent description of the claimed invention. Such a description is sufficient. *See, Lockwood v. American Airlines Inc.*, 107 F.3d 1565, 41 USPQ2d 1961; *Eiselstein v. Frank*, 52 F.3d 1035, 34 USPQ2d 1467 (Fed. Cir. 1995). Thus, Applicants submit that the specification contains a written description of the claimed invention. Withdrawal of this rejection is requested.

In view of the above amendments and remarks, in conjunction with the remarks made in the previous amendments, it is believed that the claims satisfy the requirements of the patent statutes and are patentable over the prior art. Reconsideration of the instant application and early notice of allowance are requested. The Examiner is invited to telephone the undersigned if it is deemed to expedite allowance of the application.

Respectfully submitted,

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